

Claims

1. An automatic door control system comprising:
a door;
a control module assembly;
a drive train assembly coupled to the control module assembly and the
door, wherein the drive train assembly is configured to receive a signal from
the control module assembly to easily move the door, wherein the drive train
assembly exerts a force to move the door.

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2. The automatic door control system of Claim 1, wherein the drive train
assembly uses the force required to move the door with a coefficient of
friction between a wheel of the drive train assembly and a surface that the
door interacts with to easily move the door.

3. The automatic door control system of Claim 2, wherein the drive train
assembly includes a force-producing device.

4. The automatic door control system of Claim 3, wherein the following
equation is utilized to easily move the door across the surface:

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$F_f = nF \cdot u$,
wherein F_f represents the force required to open the door, where nF
represents a normal force exerted on the wheel by the force-producing
device and u represents the coefficient of friction between the wheel and the
surface.

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5. The automatic door control system of Claim 4, wherein F_f is in the range of about 10-50 lbs.

6. The automatic door control system of Claim 5, wherein u is in the range of about .1 to 1.

7. The automatic door control system of Claim 3, wherein the force-producing device is a spring.

10 8. A method for moving a door across a surface, the method comprising:
sending a command to an automatic door control system;
analyzing and comparing the command with databases at the
automatic door control system;
determining if there is a match between the command and the
databases;

15 determining if the command can be performed based on a positional
status of a door, if there is a match between the command and the
databases;

20 activating a drive train assembly of the automatic door control system
based on the command, if the positional status of the door is such that the
command can be performed, wherein the drive train assembly applies a force
to a wheel mounted on the drive train assembly to easily move the door.

25 9. The method of claim 7 wherein the databases comprise sound databases
and preset commands databases.

10. The method of Claim 7 wherein the command is a waveform.

30 11. The method of Claim 7, wherein the automatic door control system can
be adapted to receive electronic command signals from an alternative
electronic device.